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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,438	06/10/2002	Emanuelle Coignoul	KPTS/6648	6528

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EXAMINER

CHANG, VICTOR S

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/030,438

Applicant(s)

COIGNOUL ET AL.

Examiner

Victor S Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-31 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 11-31 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Introduction

1. The Examiner has carefully considered Applicants' amendments and remarks filed on 6/28/2004. Applicants' amendments to claims 12-14, 17-30.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Rejections not maintained are withdrawn. In particular, upon reconsideration, in view of Markush language for species in claim 18, the prior restriction requirement is withdrawn. Additionally, in view of the amendment to the claims, the prior claim objection and rejection under 35 U.S.C. 112, second paragraph in sections 4-6 are also withdrawn. Further, Applicants argument "Possession of the invention by Applicants occurred prior to the publication date of WO 00/26103" is correct, as such the prior rejection based on WO 00/26103 is withdrawn.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 11-15, 24 and 25 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Burns (US 5496862).

Burns' invention is directed to a molded closure for a liquid container comprising a thermoplastic elastomer (TPE) and a blowing agent. The molded closure is particularly suitable for use as a synthetic wine cork (stopper) in a wine bottle (Abstract). The TPE comprises a styrenic block copolymer (column 4, lines 4-5). In a preferred embodiment, the composition comprises about 96% TPE, about 2% blowing agent, about 2% low density polypropylene (branched polyolefin), and a minor percentage of a desired pigment (column 5, lines 9-11).

For claims 11, 12 and 24, although Burns is silent about the melt flow index of the low density polypropylene, Burns does teaches that the composition is mixed to homogeneity (column 6, lines 30-32). As such, since Burns teaches the same subject matter as the instant invention, it is the Examiner's position that a suitable melt flow index is either anticipated by Burns, or an obvious optimization to one of ordinary skill in the art, motivated by the desire to obtain a molded cork with a homogeneous polymer blend. It should be noted that where the claimed and prior art products are shown to be identical or substantially identical in structure or composition, or are produced by

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identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. See MPEP § 2112.01.

For claims 13 and 14, Burns expressly teaches that a styrenic block copolymer such as styrene-butadiene-styrene copolymer and styrene-butadiene copolymer are suitable TPE (column 4, lines 4-9).

For claims 15 and 16, although Burns is silent about the overall styrene content in the styrenic block copolymer and its apparent molecular weight, Burns does teach that various styrenic block copolymers are suitable, and provide superior properties to the molded closure when compared to other TPE (column 4, lines 4-16). As such, since Burns teaches the same subject matter as the instant invention, it is the Examiner's position that a suitable overall styrene content in the styrenic block copolymer and its molecular weight are either anticipated by Burns, or obvious selections to one of ordinary skill in the art, motivated by the desire to obtain a molded cork having controllable properties such as shape, elasticity, etc. (column 3, lines 19-20).

For claim 24, Burns expressly teaches that blowing agent generally comprises greater than 1%, and less than 9% of the composition (column 4, lines 27-29).

For claim 25, Burns expressly teaches that suitable blowing agents include azodicarbonamide, sodium bicarbonate, etc. (column 4, lines 55-56).

7. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns (US 5496862) in view of Burnell (US 5727182).

The teachings of Burns are again relied upon as set forth above.

For claims 17 and 18, Burns lacks a teaching that the styrenic block copolymer is a hydrogenated block copolymer having a vinyl content of the conjugated diene block of at least 35 mol% based on the total diene content. However, it is noted that Burnell's invention is directed to a blowing agent for making a foamable materials to be molded into a variety of thermoplastic structures (Abstract). Burnell teaches that the styrene/diene (e.g., butadiene, isoprene, etc.) block copolymers are generally known in the art, and they may be diblock or triblock materials. Furthermore, the block copolymers can be hydrogenated, nonhydrogenated, or partially hydrogenated (column 3, lines 14-24). As such, since Burnell clearly teaches that hydrogenated and nonhydrogenated styrenic block copolymers are equivalent in making foamable materials, it would have been obvious to one of ordinary skill in the art to substitute Burns nonhydrogenated styrenic block copolymer with hydrogenated styrenic block copolymer. It should be noted that the selection of and substituting a known equivalent material based on its suitability for its intended use supported a *prima facie* obviousness determination. See MPEP § 2144.07. As to the amount of vinyl content in the hydrogenated block copolymer, in the absence of unexpected results, since the prior art teaches the same subject matter as the instant invention, it is the Examiner's position that a suitable vinyl content is either anticipated, or an obvious optimization to one of ordinary skill in the art over Burns in view of Burnell, motivated by the desire to obtain a molded cork having controllable properties such as shape, elasticity, etc. (Burns, column 3, lines 19-20).

For claim 19, Burns lacks an express teaching that the styrenic block copolymers comprise a mixture of a S-EP diblock copolymer and a S-EB-S triblock copolymer. However, the Examiner notes that Burns does expressly teaches that both diblock and S-EB-S triblock copolymers are suitable TPE (column 4, lines 4-11), and it is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose. The idea of combining them flows logically from their having been individually taught in the prior art. See MPEP § 2144.06. As to the suitable molecular weights of the triblock and diblock copolymer, in the absence of unexpected results, the Examiner notes that Burns does teach that various styrenic block copolymers are suitable, and provide superior properties to the molded closure when compared to other TPE, as set forth above. As such, since the prior art teaches the same subject matter as the instant invention, again it is the Examiner's position that suitable molecular weights are either anticipated by Burns to provide required processibility and physical properties, or an obvious optimization to one of ordinary skill in the art over Burns in view of Burnell, motivated by the desire to obtain a having controllable properties such as shape, elasticity, etc. (Burns, column 3, lines 19-20).

8. Claims 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns (US 5496862) in view of Hwo (US 5585411).

The teachings of Burns are again relied upon as set forth above.

For claim 20, Burns lacks a teaching that the branched polyolefin is poly-1-butene. However, it is noted that Hwo's invention is directed to a plastic foam produced

from a blend comprising poly-1-butene, styrenic block copolymer. The foam has excellent tear resistance and flexibility properties (Abstract). As such, it would have been obvious to one of ordinary skill in the art of plastic foam to modify Burns styrenic block copolymer as a blend with poly-1-butene, motivated by the desire to obtain a bottle closure with improved tear resistance and flexibility.

For claim 21, Hwo expressly teaches that the poly-1-butene polymers have a melt flow in the range of from about 0.1 to 1500 (column 2, lines 11-12).

For claims 22 and 23, Hwo expressly teaches an embodiment of a blend comprises from about 65 wt % to about 90 wt % of poly-1-butene, and from about 10 to about 35 wt % of styrenic block or star copolymer (column 4, lines 32-36).

9. Claims 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns (US 5496862) in view of Burnell (US 5727182), and further in view of Hwo (US 5585411).

The teachings of Burns, Burnell and Hwo are again relied upon as set forth above.

For claims 26-30, it is noted that they contain the same claimed elements of claims 1-25, as such they are also rejected for the reasons as set forth above.

For claim 31, Burns is silent about the density of the foamed bottle closure. However, since Burns teaches the same subject matter as the instant invention, it is the Examiner's position that a suitable closure density is either anticipated by Burns, or obvious selections to one of ordinary skill in the art of bottle stopper, motivated by the

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desire to obtain a molded cork as a replacement for natural cork (column 3, lines 15-17).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S Chang whose telephone number is 571-272-1474. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VSC
Victor S Chang
Examiner
Art Unit 1771

9/14/2004


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